Figure 1(a)

TTCGCCTGTAAAACCGCCAATGGTACCGCAATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCAATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCCGTCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCAATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCTATTGGCGGTGGCAGCGCCCAATGTTTATGTAAACCTTGCGCCCGTCGTGAATGTG TTTGCCTGTAAAACCGCCAATGGCACCGCTATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACTTGGCGCCCCGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCCTATTGGCGGTGGCAGCGCTAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCCGTCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCCGTCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCTATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCCGTCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCAATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACAGCTATCCCTATTGGCGGTGGCAGCGCTAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG TTCGCCTGTAAAACCGCCAATGGTACCGCAATCCCTATTGGCGGTGGCAGCGCCAATGTTTATGTAAACCTTGCGCCTGCCGTGAATGTG $\widehat{\Box}$ 1 1 (1)7 (1)B210 B203 EC58 EC60 EC61 EC80 EC95 B238 B240 EC56 EC42 EC62 **DS17** B212 B217

Figure 1(b)

91 9191966910000000000000000000000000000
J96 EC45 B217 DS17 B212 EC42 EC56 B210 B210 EC58 EC60 EC60

Figure 1(c)

GGTTCGGCTTATGGCAGCGTGTTATCTAGTTTTTCCGGGACCGTAAAATATAAGCCAGTAGCTATCCTTTCCCTACTACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCGACCACCAGTGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTTCCGGGACCGTAGAATATATAGTGGCAGTAGCTATCCATTTCCTACCACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCTACCACCAGCGAAACG GGTTCGGCTTATGGCGGCGTGTTATCTAGTTTTTCCGGGACCGTAAAATATAAAGCAGTAGCTATCCTTTCCCTACTACCAGCGAAACG GGTTCGGCTTATGGCGGCGTGTTATCTCATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCTACCACCAGGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCGACCACTAGTGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCTACCACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCGACTACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCGACCACCAGGGAAACG GGTTCGGCTTATGGCGGCGTGTTATCTAGTTTTTCCGGGATCGTAAAATATAAGGCAGTAGCTATCCTTTCCCTACTACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATATAGTGGCAGTAGCTATCCATTTTCCGACCACCAGTGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCTACCACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGATCGTAAAATATAGTGGCAGTAGCTATCCTTTCCCTACCACCAGCGAAACG GGTGCGGCTTATGGCGGCGTGTTATCTAGTTTTTCCGGGACCGTAAAATATAATGGCAGTAGCTATCCTTTCCCTACTACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCTACCACCAGCGAAACG GGTGCGGCTTATGGCGGCGTGTTATCTAGTTTTTCCGGGACCGTAAAATATAATGGCAGTAGCTATCCTTTCCCTACTACCAGCGAAACG GGCTCGGCTTATGGCGGCGTGTTATCTAATTTTTCCGGGACCGTAAAATATAGTGGCAGTAGCTATCCATTTCCGACCACCAGCGAAACG GGTTCGGCTTATGGCGGCGTGTTATCTAGTTTTTCCGGGACCGTAAAATATAATGGCAGTAGCTATCCTTTCCCTACTACCAGCGAAACG (181)(181)(181)(181)181) (181)(181)(181)(181)(181)(181)(181)(181)(181)(181)(181)(181)181) EC58 EC60 EC80 EC95 EC62 B238 B240 B210 B203 EC61 B212 EC42 EC56 **DS17** B217

Figure 1(d)

		360
J96	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
EC45	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCGGTGAGCAGTGCGGGGGGGG
B217	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGGGGGG
DS17	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCGGTGAGCAGTGCGGGGGGGG
B212	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGGGGGG
EC42	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
EC56	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGGGGGG
B210	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGGGGGG
B203	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCGGTGAGCAGTGCGGGGGGGG
EC58	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCGGTGAGCAGTGCGGGGGGGG
EC60	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
EC61	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
EC80	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
EC95	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTTATTTGACGCTGGTGAGCAGTGCGGGGGGGAGTGGCGATT
EC62	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGTGGGGTGGCGTTGGCGATTT
B238	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
B240	(271)	CCGCGCGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG
B242	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGTGGGGTGGCGATT
EC189	(271)	CCGCGGGTTGTTTATAATTCGAGAACGGATAAGCCGTGGCCGGTGGCGCTTTATTTGACGCCTGTGAGCAGTGCGGGCGG

Figure 1(e)

AAAGCTGGCTCATTAA	
.) AAAGCTGGCTCATTAATTGCCGTGCTTATTTTGCGACAAGACCAACTATAACAGCGATGATTTCCAGTTTGTGTGGAATATTTACGCC	
•	
.) AAAGCTGGCTCATTAATTGCCGTGCTTATTTTGCGACAGACCAACAACTATAACAGCGATGATTTCCAGTTTGTGTGGAATATTTACGCC	
AAAGCTGGCTCATTAA	
.) AAAGCTGGCTCATTAATTGCCGTGCTTATTTTGCGACAGACCAACTATAACAGCGATGATTTCCAGTTTGTGTGGAATATTTACGCC .) AAAGCTGGCTCATTAATTGCCGTGCTTATTTTGCGACAGACCAACAACTATAACAGCGATGATTTCCAGTTTGTGTGGAATATTTACGCC	J96 (361) EC45 (361)
361 450	

Figure 1(f)

AATAATGATGTGGTGGTGCCCACTGGCGGCTGCGATGCTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTTGGTTCAGTGCCG AATAATGATGTGGTGGTGCCCACTGGCGGCTGTGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTTGGTTCAGTGCCG AATAATGATGTGGTGGTGCCCACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCG AATAATGATGTGGTGGCCCACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCG AATAATGATGTGGTGGTGCCCACTGGCGGCTGTGATGCTTCTGCTCGTGATGTCACCGTTACTTTGCCGGACTACCCTGGTTCAGTGCCG <u>AATAATGATGTGGTGCCCACTGGCGGCTGCGATGCTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCG</u> AATAATGATGTGGTGGTCCCACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTAGTTCAGTGCCG AATAATGATGTGGTGGTGCCCACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCG <u> AATAATGATGTGGTGCTGCCCACTGGCGGCTGTGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCG</u> AATAATGATGTGGTGGTGCCCACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCG AATAATGATGTGGTGCTGCCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCA AATAATGATGTGGTGGTGCCCACTGGCGGCTGTGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCAGACTACCCTGGTTCAGTGCCG AATAATGATGTGGTGGTGCCTACTGGCGGCTGCGATGTTTCTGCTCATGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCA AATAATGATGTGGTGGTGCCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCGTGGTTTCAGTGCCA AATAATGATGTGGTGGTGCCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCGTGGTTTCAGTGCCA AATAATGATGTGGTGGTGCCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTTGGTTCAGTGCCA AATAATGATGTGGTGGCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTGGTTCAGTGCCA AATAATGATGTGGTGGTGCCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGTTACTCTGCCGGACTACCCTTGCTGGTTCAGTGCCA AATAATGATGTGGTAGTGCCTACTGGCGGCTGCGATGTTTCTGCTCGTGATGTCACCGGTTACTCTGCCGGACTACCCTGGTTCAGTGCCA (451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)(451)B212 EC42 EC56 B210 EC58 EC60 EC80 EC95 EC62 B217 DS17 B203 EC61

Figure 1(g)

ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGGTATTACCTATCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGGTATTACCTCTCCGGCACAAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGGTGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGGTATTACCTATCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACACACGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTATCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGGTATTACCTCTCCGGCACAAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGGGAAAAGCCAAAACCTGGGGGTATTACCTCTCCGGGACAAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGGGGAAAAGCCAAAACCTGGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC ATTCCTCTTACCGTTTATTGTGCGAAAAGCCAAAACCTGGGGGTATTACCTCTCCGGCACAACCGCAGATGCGGGCAACTCGATTTTCACC (541)(541)(541)(541)(541)(541)(541)541) (541)(541) (541)(541)(541)(541)(541) (541)(541)EC42 EC56 B210 B203 EC58 EC60 EC80 **EC95** EC62 B238 B240 **DS17** B212 EC61 B217

Figure 1(h)

AATACCGCGTCGTTTTTCACCCGCGCGCGCGGCGTCGGCGTACAGTTGACGCGCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTTCACCTGCACAGGGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA <u>AATACCGCGTCGTTTTTCACCCGCGCGCGCGGGGCGTACAGTTGGCGCGCAACGGTACGGTTATTCCAGCGAATAACACGGTATCGTTA</u> AATACCGCGTCGTTTTTCACCCGCGCGCGCGGGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTTCACCCGCGCGCGCGGGGCGTACAGTTGACGGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTTCACCTGCACAGGCGTCGGCGTACAGTTGACGCGCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTTCACCTGCACAGGGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCTTTA <u>AATACCGCGTCGTTTTTCACCTGCACAGGGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA</u> AATACCGCGTCGTTTTTCACCCGCGCGCGCGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTTCACCTGCACAGGCGTCGGCGTACAGTTAACGCGCAACGGTACGATTAATCCAGCGAATAACACGGTATCGTTA AA TACCGCGTCGTTTTTCACCTGCACAGGGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTTCACCTGCACAGGGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAACGAATAACACGGTATCGTTA AA TACCGCGTCGTTTTTCACCAGCGCGCAGGCGTCGGCGTACAGTTGACGCGAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA <u>AATACCGCGTCGTTTTCACCCGCGCGCGGCGTCGGCGTACAGTTGACGCGCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA</u> <u>AATACCGCGTCGTTTTCACCAGCGCAGGGCGTCGGCGTTCAGTTGACGCGCAACGGTACGATTATTCCCACGAATAACACGGTATCGTTA</u> <u>AATACCGCGTCGTTTTCACCCGCGCGCGGGGCGTCGGCGTACAGTTGACGCGCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA</u> <u>AATACCGCGTCGTTTTCACCTGCCACAGGCGTCGGCGTACAGTTGACGCGCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA</u> AATACCGCGTCGTTTTTCACCAGCGCGCAGGCGCTCGGCGTACAGTTGACGCCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA AATACCGCGTCGTTTTCACCTGCACAGGGCGTCGGCGTACAGTTGACGCGCAACGGTACGATTATTCCAGCGAATAACACGGTATCGTTA (631)(631)(631)(631)(631) (631)(631) (631)(631)(631)(631)(631)(631)(631)(631)(631)(631)(631)EC95 EC56 B210 EC58 EC60 EC80 EC62 B238 B212 EC42 B203 EC61 B240 B217 DS17

Figure 1(i)

GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTACGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTGAGTCTGGGATTAACGGCAAATTATGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATTC GGAGCAGTAGGGACTTCGGCGGTGAGTCTGGGATTTAACGGCAAATTAACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATTC GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTTAACGGCAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAAATGTGCGATCG GGAGCAGTAGGGACTTCGGCGGTGAGTCTGGGATTAACGGCAAATTATGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTGAGTCTGGGATTTAACGGCAAATTTATGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTAACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATTCG GGAGCAGTAGGGACTTTCGGCGGTAAGTCTGGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCGGGGGTGACTGCAGGGAATGTGCAATCG GGAGCAGTAGGGACTTCGGCGGTGAGTCTGGGATTAACGGCAAATTACGCACGTACCGGAGGGCAGGTGACTGCAGGAATGTGCAATTG GGAGCAGTAGGGACTTCGGCGGTGAGTCTGGGATTAACGGCAAATTATGCACGTACCGGAGGGCAGGTGACTGCAGGGAATGTGCAATTC GGAACAGTAGGAACTTCGGCGGTAAGTCTGGGATTAACGGCAAATTACGCACGTACCGGCGGGGAGGTGACTGCAGGGAATGTGCAATTGC (721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)(721)EC56 B210 EC58 EC60 EC80 EC95 EC62 B238 B212 EC42 B203 B240 B217 **DS17** EC61

Figure 1(j)

		811 837
196	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC45	(811)	ATTATTGGCGTGACTTTTTGTTTATCAA
B217	(811)	ATTATTGGCGTGACTTTTTGTTTATCAA
DS17	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
B212	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC42	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC56	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
B210	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
B203	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC58	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC60	(811)	ATTATTGCCGTGACTTTTGTTTATCAA
EC61	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC80	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC95	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC62	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
B238	(811)	ATTATTGCCGTGACTTTTGTTTATCAA
B240	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
B242	(811)	ATTATTGGCGTGACTTTTGTTTATCAA
EC189	(811)	ATTATTGGCGTGACTTTTTTTTATCAA

Figure 2(a)

		1 50
B210.aa	(1)	50
B212.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
B217.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
B223.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
B228.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
B238.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAIAVNVGQNLVVDLSTQIFCHNDYPE
B240.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPVVNVGQNLVVDLSTQIFCHNDYPE
B242.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQTFCHNDYPE
DS17.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC42.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC45.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC56.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPVVNVGQNLVVDLSTQIFCHNDYPE
EC58.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC60.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPVVNVGQNLVVDLSTQIFCHNDYPE
EC61.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC62.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC80.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC89.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
EC95.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
G189.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
J96.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPVVNVGQNLVVDLSTQIFCHNDYPE
NU14.aa	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
Consensus	(1)	FACKTANGTAIPIGGGSANVYVNLAPAVNVGQNLVVDLSTQIFCHNDYPE
D010	(== 1	51 100
B210.aa B212.aa	(51)	TITDYVTLQRGSAYGGVLSNFSGIVKYSGSSYPFPTTSETPRVVYNSRTD
	()	The state of the s
	(51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa	(51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa	(51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa	(51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa	(51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa	(51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa	(51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa	(51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa EC58.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa EC58.aa EC60.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVEYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa EC62.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSHFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSHFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa EC62.aa EC89.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC56.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa EC62.aa EC80.aa EC89.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSHFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa EC58.aa EC60.aa EC61.aa EC62.aa EC80.aa EC89.aa EC89.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa EC695.aa EC89.aa EC95.aa G189.aa J96.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa EC695.aa EC89.aa EC95.aa G189.aa J96.aa NU14.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD
B217.aa B223.aa B228.aa B238.aa B240.aa B242.aa DS17.aa EC42.aa EC45.aa EC56.aa EC56.aa EC60.aa EC61.aa EC62.aa EC695.aa EC89.aa EC95.aa G189.aa J96.aa	(51) (51) (51) (51) (51) (51) (51) (51)	TITDYVTLQRGSAYGGVLSSFSGIVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGAAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYSGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSSFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD TITDYVTLQRGSAYGGVLSNFSGTVKYNGSSYPFPTTSETPRVVYNSRTD

Consensus

Figure 2(b)

```
150
  B210.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  B212.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  B217.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  B223.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  B228.aa
           (101) KPWPVALYLTPVSSAGGVVIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  B238.aa
           (101) KPWPVALYLTPVSSAGGLVIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  B240.aa
  B242.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  DS17.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC42.aa
           (101) KPWPVALYLTPVSSAGGVVIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC45.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC56.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC58.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC60.aa
           (101) KPWPVALYLTPVSSAGGVVIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC61.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC62.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLMAVLILRQTNNYNSDDFQFVWNIYA
  EC80.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
  EC89.aa
           (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
 EC95.aa
           (101) KPWPVALYLTLVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
 G189.aa
          (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTKNYNSDDFQFVWNIYA
  J96.aa
          (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
 NU14.aa
          (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
Consensus
          (101) KPWPVALYLTPVSSAGGVAIKAGSLIAVLILRQTNNYNSDDFQFVWNIYA
                 151
                                                                200
 B210.aa
           (151) NNDVVVPTGGCDASARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
          (151) NNDVVVPTGGCDASARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 B212.aa
           (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 B217.aa
          (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 B223.aa
          (151) NNDVVVPTGGCDVSAHDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 B228.aa
 B238.aa
          (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 B240.aa
          (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 B242.aa (151) NNDVVVPTGGCDVSAHDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 DS17.aa (151) NNDVVVPTGGCDASARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 EC42.aa (151) NNDVVVPTGGCDVSARDVTVTLPDYPGSVPIPLTVYCAKSQNLGYYLSGT
 EC45.aa (151) NNDVVVPTGGCDVSARDVTVTLPDYPGSVPIPLTVYCAKSQNLGYYLSGT
 EC56.aa (151) NNDVVVPTGGCDVSARDVTVTLPDYPGSVPIPLTVYCAKSQNLGYYLSGT
 EC58.aa
         (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
         (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 EC60.aa
 EC61.aa (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
         (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 EC62.aa
 EC80.aa (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
         (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 EC89.aa
          (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 EC95.aa
          (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
 G189.aa
           (151) NNDVVVPTGGCDVSARDVTVTLPDYPGSVPIPLTVYCAKSQNLGYYLSGT
  J96.aa
 NU14.aa
           (151) NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT
           (151) \verb| NNDVVVPTGGCDVSARDVTVTLPDYRGSVPIPLTVYCAKSQNLGYYLSGT| \\
```

123

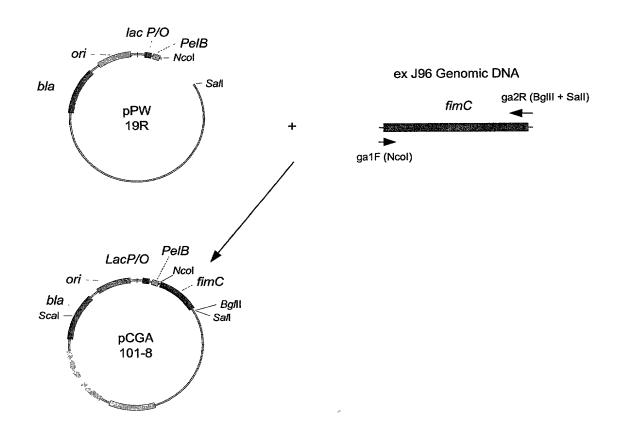
Figure 2(c)

```
201
                                                                250
  B210.aa
           (201) HADAGNSIFTNTASFSPAQGVGVQLARNGTVIPANNTVSLGAVGTSAVSL
  B212.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  B217.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  B223.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  B228.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  B238.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  B240.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPTNNTVSLGAVGTSAVSL
  B242.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  DS17.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC42.aa (201) TADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC45.aa (201) TADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC56.aa (201) TADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC58.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC60.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC61.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
  EC62.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTINPANNTVSLGAVGTSAVSL
  EC80.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTANGTIVPANNTVSLGAVGTSAVSL
  EC89.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTANGTIVPANNTVSLGAVGTSAVSL
  EC95.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
 G189.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGTVGTSAVSL
  J96.aa (201) TADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
 NU14.aa (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
Consensus (201) HADAGNSIFTNTASFSPAQGVGVQLTRNGTIIPANNTVSLGAVGTSAVSL
                 251
 B210.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 B212.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 B217.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 B223.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 B228.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 B238.aa
          (251) GLTANYARTGGQVTAGNVQSIIGATFVYQ
 B240.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 B242.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 DS17.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC42.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC45.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC56.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC58.aa
          (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC60.aa
          (251) GLTANYARTGGQVTAGNVRSIIAVTFVYQ
 EC61.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC62.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC80.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC89.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 EC95.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 G189.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
  J96.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
 NU14.aa (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ
```

Consensus (251) GLTANYARTGGQVTAGNVQSIIGVTFVYQ

Fig. 3

Step1: Construction of pCGA101-8



Step 2: Construction of pCGA122-30

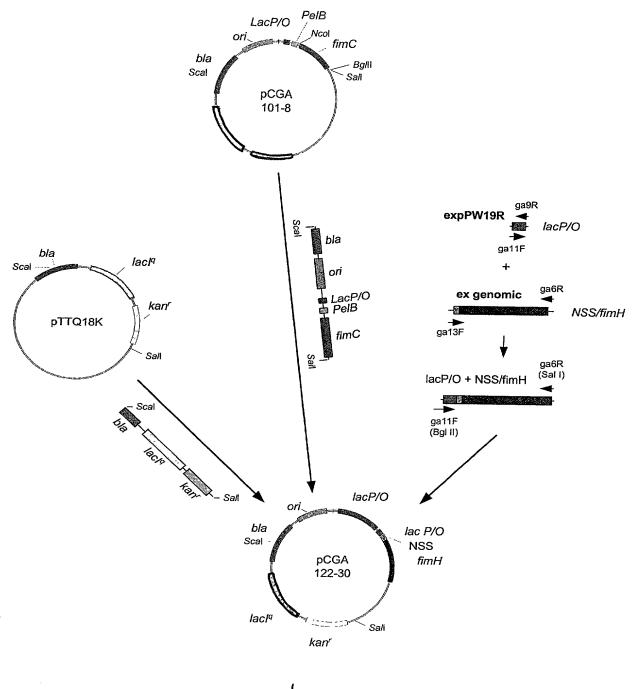


Fig 5.

Step 3: Selection of final clone

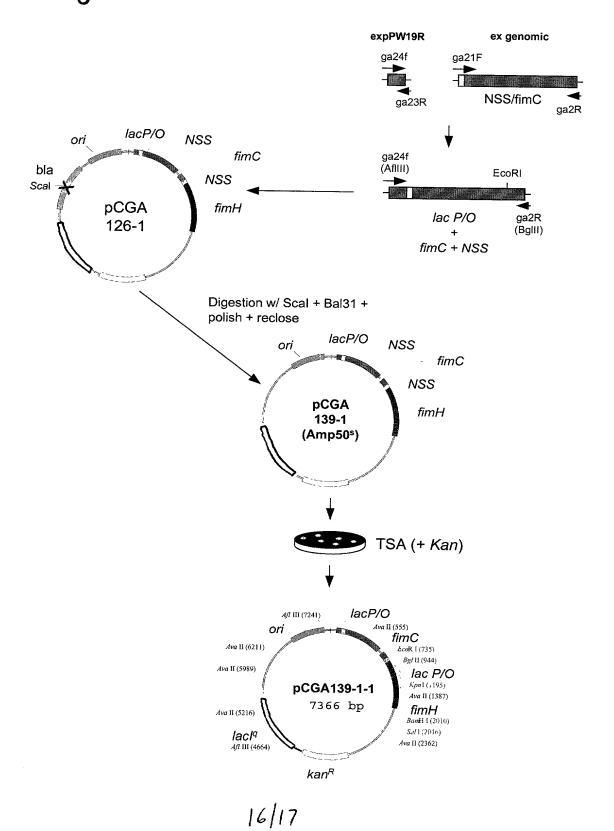


Fig. 6

